

This checklist discusses six major topics areas:

Maintenance Supplies
Dust Control
Floor Cleaning
Drain Traps
Moisture, Leaks, and Spills
Combustion Appliances
Pest Control

Instructions:

1. Read the *IAQ Background*
2. Read each item on this Checklist.
3. Check the diamond(s) as appropriate or check the circle if you need additional help with an activity
4. Return this checklist to the IAQ Coordinator and keep a copy for future reference.

Name:

Room or Area:

School:

Date Completed:

Signature:

Building Maintenance Checklist

MAINTENANCE SUPPLIES

Maintenance supplies may emit air contaminants during use and storage. Products low in emissions are preferable. However, a product that is low in emissions is not necessarily better if it is more hazardous, despite the lower emissions, if it has to be used more often or at a higher strength. Examples of maintenance supplies that may contribute to indoor air quality (IAQ) problems include:

- Caulks
- Solvents
- Paints
- Adhesives
- Sealants
- Cleaning Agents

Learn about your maintenance supplies

- Review and become familiar with your maintenance supplies
- Read labels and identify precautions regarding effects on indoor air or ventilation rate and requirements

◇ Supplies reviewed and okay

○ Need help determining impact of supplies

If you make purchase decisions, or recommend products for purchase, confirm that supplies are safe to use

- Ask vendors and manufacturers to help select the safest products available that can accomplish the job effectively

◇ Supplies are safe to use

○ Need help determining if supplies are safe

Follow good safety, handling, disposal, and storage practices

- Develop appropriate procedures and have supplies available for spill control
- Exhaust air from chemical and trash storage areas to the outdoors
- Store chemical products and supplies in sealable, clearly labeled containers
- Follow manufacturers' instructions for use of maintenance supplies
- Follow manufacturers' instructions for disposal of chemicals, chemical-containing wastes, and containers

◇ Following good safety, handling, disposal, and storage practices

◇ Safety, handling, storage, and disposal practices are being revised

○ Need help with good safety, handling, disposal, and storage practices

Establish maintenance practices that minimize occupant exposure to hazardous materials

- Substitute less- or non-hazardous materials where possible
- Schedule work involving odorous or hazardous chemicals for periods when the school is unoccupied
- Ventilate during and after use of odorous or hazardous chemicals

◇ **Procedures established and followed to minimize occupant exposure**

○ **Need help to develop and implement procedures to minimize occupant exposure**

DUST CONTROL

By reducing the amount of dust and dirt that enters the school, and by reducing the amount of dust that leaves vacuum bags and dust cloths, it will be possible to maintain a clean school with less effort. A cleaner school can also have positive physical and psychological effects on the students and staff. Complaints of illness and discomfort have been associated with buildings having high dust levels. In addition to dust, other particles such as pollens which can cause allergic reactions will also be reduced.

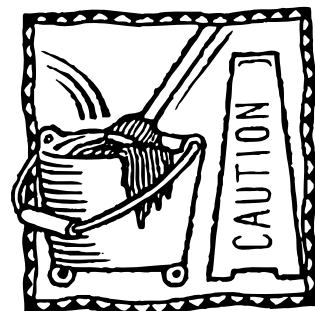
Purchase and maintain barrier floor mats for all school entrances

- Barrier mats need to be long enough to allow five full steps for people entering the school (this allows dirt to be cleaned from the mats rather than from all over the school, saving cleaning costs)

- Vacuum each barrier mat daily using a beater brush or beater bar vacuum, vacuuming in two directions (in-line and side-to-side)

◇ **Barrier mats purchased and maintained**

○ **Need help with barrier mats**



Use higher efficiency vacuum bags

- Standard paper or cloth bags allow lots of dust to pass completely through the vacuum and back into the air and onto surfaces. Use micro-filtration bags which retain dust and particles in the 3 micron size range, or smaller. Although the bags cost more, labor costs are reduced

◇ **High efficiency bags in use**

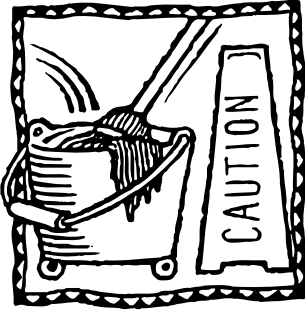
○ **Need help with obtaining proper bags**

Use proper dust wiping techniques

- Ensure that dust that has been collected remains on the wipe by using a wiping motion with a folded wipe, rather than a flicking motion with a crumpled-up wipe
- Wrap hand-held feather-type dusters with a dust cloth. Use a wiping rather than a flicking or sweeping motion

◇ **Proper dusting techniques in use**

○ **Need help with dust wiping**



Vacuum dust from heating, cooling, and ventilation air return grilles and air supply vents periodically

- In addition to vacuuming the grilles and vents using a soft bristle attachment, vacuum the ceiling and wall surfaces adjacent to the grilles and vents to remove visible dust

◇ **Dusting is performed periodically**

○ **Need help with dusting grilles and vents**

FLOOR CLEANING

All flooring, including vinyl, wood, terrazzo, tile, and carpet, requires daily attention to ensure cleanliness. In addition to the prevention technique of barrier mats as noted in previous activities, apply the following activities. Contact floor suppliers or manufacturers for recommended maintenance techniques. Follow specific guidelines of the Carpet and Rug Institute (CRI) for properly maintaining carpets (to obtain these guidelines, see information in **Appendix I, Resources**, in the Coordinator's Guide).

- Vacuum daily as needed for soil removal. Use a vacuum with brushes, beater bars, strong suction, and a high efficiency filter bag that will filter particles down to the 3 micron or smaller range
- Remove spots and stains immediately, using the flooring manufacturer's recommended techniques. Use care to prevent excess moisture or accumulation of cleaning residue, and ensure that cleaned areas will dry quickly

◇ **Floors are cleaned daily as needed and moisture has been removed**

○ **Need help with daily floor maintenance**

Perform restorative maintenance

- Apply the manufacturer's recommended guidelines when cleaning to remove accumulated contaminants. For carpets, CRI recommends periodic extraction cleaning, wet or dry, and complete removal of the moisture and cleaning agents

◇ **Restorative maintenance is properly performed as needed**

○ **Need help with restorative floor maintenance**

DRAIN TRAPS

Drain traps can cause IAQ problems when water in the drain trap evaporates due to infrequent use. If the building interior is under negative pressure, soil gas or sewer gas can be drawn indoors through a dry drain trap.

Confirm that all drains have drain traps

- Install traps on any untrapped drains
 - ◇ **All drains have drain traps**
 - **Need help with traps**
- Confirm that all drain traps in areas to which only you have access are filled**
- Pour water down floor drains once per week (about one quart)

- Run water in sinks at least once per week (about one pint)
- Check water in seldom used toilets once each week. If low, flush

◇ **Traps are filled at least once per week**

○ **Need help filling traps regularly**

MOISTURE, LEAKS, AND SPILLS

Many people have allergic reactions to mold and mildew. Mold and mildew can grow almost anywhere that offers a food source and a small amount of moisture, whether from leaks and spills or condensation. Mold and mildew do not require standing water in order to grow. The higher the relative humidity, the higher the probability of fungal growth.

Assemble the following tools before starting the activities:

- a small floor plan for taking notes
- an instrument to measure relative humidity (e.g., sling psychrometer)

Inspect the building for signs of moisture, leaks, or spills

- Check for moldy odors
- Look for stains or discoloration on the ceiling, walls, or floor
- Check cold surfaces (e.g., locations under windows and in corners formed by exterior walls, uninsulated cold water piping)

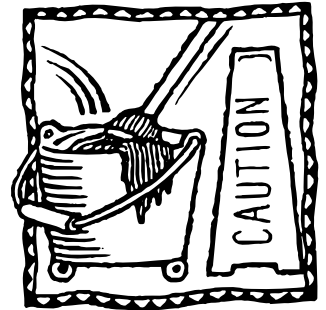
- Check areas where moisture is generated (e.g., locker rooms, bathrooms)
- Look for signs of water damage in:
 - indoor areas in the vicinity of known roof or wall leaks
 - walls around leaky or broken windows
 - floors and ceilings under plumbing
 - duct interiors near humidifiers, cooling coils, and outdoor air intakes
- If you discover active leaks during your inspection, note their location(s) on your floor plan and repair them as quickly as possible

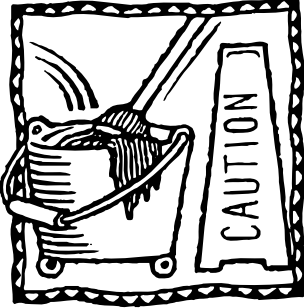
◇ **There are no signs of moisture, leaks, or spills**

○ **Found signs of moisture, leaks, or spills, or need help inspecting**

Respond promptly when you see signs of moisture, or when leaks or spills occur

- Clean and dry damp or wet building materials and furnishings
- Work with manufacturers of furnishings and building materials to learn recommended cleaning procedures and/or identify competent contractors who can clean damp materials
- Porous, absorbent building materials or furnishings, such as ceiling tiles, wall boards, floor coverings, etc., must be thoroughly dried and cleaned as soon as





possible. In some cases these materials might have to be disinfected. If these materials can't be dried and cleaned within 24 hours, they may have to be replaced after the cause of the moisture problem has been corrected

◇ **Moisture, leaks, or spills fixed**

○ **Need help fixing damage from moisture, leaks, or spills**

Prevent moisture condensation

There are several methods to prevent condensation:

- Reduce the potential for condensation on cold surfaces (piping, exterior walls, roof, or floor) by adding insulation. (Note: When installing insulation that has a vapor barrier, put the vapor barrier on the warm side of the insulation.)
- Raise the temperature of the air
- Improve air circulation in the problem location
- Decrease the amount of water vapor in the air
- In drier climates or winter, supply more outdoor ventilation air
- In humid climates or during humid times of the year, use a dehumidifier or desiccants to dry the air (for more information, obtain **Appendix H** from the IAQ Coordinator)
- Increase the capacity or operating schedule of existing exhaust fan(s); or add a local exhaust fan near the source of the water vapor

◇ **Moisture prevention activities completed**

◇ **Moisture prevention activities underway**

○ **Need help with moisture prevention activities**

COMBUSTION APPLIANCES

Combustion appliances are potential sources of carbon monoxide and other combustion gases. Carbon monoxide is odorless yet toxic, so it is important that appliances are properly vented to remove combustion gases. If inadequate combustion air is available to an appliance, air may be pulled, or backdrafted, down the flue, bringing combustion gases back into the indoors instead of exhausting them outside.

Note odors when first entering a location containing combustion appliances

- One's nose quickly becomes accustomed to odors, but upon first entering a room the smell of combustion gas odors may indicate a leak or backdrafting problem

◇ **No combustion odors**

○ **Need help resolving combustion gas problem**

Visually inspect exhaust components

- Inspect flue components for leaks, disconnections, and deterioration
- Inspect flue components for corrosion and soot

◇ **No apparent problems**

○ **Need help repairing exhaust components**

Check for backdrafting of combustion appliances

- When the combustion appliances are operating, and the building ventilation systems are in normal operating mode, use chemical smoke to determine whether air is flowing up the flue by puffing smoke near any vent openings or joints

◇ No backdrafting

○ Need help resolving backdrafting problem

PEST CONTROL

Use Integrated Pest Management (IPM) methods of pest control

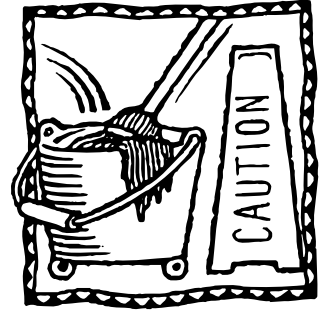
- ❑ Do not rely on widespread, indiscriminate use of pesticides to control pests
- ❑ If you are in charge of pest control, obtain information about IPM from the IAQ Coordinator (information available in the Coordinator's Guide)

- ❑ If pesticides are used outdoors, do not apply near outdoor air intakes for the ventilation system. If unavoidable, shut down the affected ventilation system(s) and remove occupants until application has been completed and ventilation has been restored. Similarly, avoid application near doors and open windows

◇ No pest problems

◇ Already using Integrated Pest Management

○ Need information or assistance with IPM



- ❑ **NO PROBLEMS TO REPORT.** I have completed all activities on this Checklist, and I do not need help in any areas.